

Application No.: 10/723,947

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AMENDMENTS TO THE CLAIMS

1. (Currently amended) A recombinant ZCCT1 protein coding sequence comprising a nucleic acid that hybridizes to a nucleic acid molecule encoding SEQ ID NO:75 under hybridization conditions that include at least one wash in 0.1% X-SSC and 0.1% SDS at 60-65° for thirty minutes. An isolated nucleic acid that encodes a polypeptide having at least 90% identity to the polypeptide encoded by SEQ ID NO: 75.

2. (Currently amended) The recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 1 wherein said sequence isolated nucleic acid is operably linked to a promoter.

3. (Currently amended) The recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim [[3]]2 wherein the promoter is an inducible promoter.

4. (Currently amended) The recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim [[3]]2 wherein the promoter is a regulated promoter.

5. (Currently amended) The recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim [[3]]2 wherein the promoter is a constitutive promoter.

6. (Currently amended) A vector comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 1.

7. (Currently amended) A vector comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim [[1]] 2.

8. (Currently amended) A vector comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 3.

9. (Currently amended) A vector comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 4.

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10. (Currently amended) A vector comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 5.
11. (Previously presented) A cell comprising the vector of claim 6.
12. (Previously presented) A cell comprising the vector of claim 8.
13. (Previously presented) A cell comprising the vector of claim 9.
14. (Previously presented) The cell of claim 11 wherein said cell is a plant cell.
15. (Previously presented) The cell of claim 12 wherein said cell is a plant cell.
16. (Previously presented) The cell of claim 13 wherein said cell is a plant cell.
17. (Currently amended) A transgenic plant comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 1.
18. (Previously presented) The transgenic plant of claim 17 wherein said plant is selected from the group consisting of wheat, barley, rye, oats, and forage grasses.
19. (Previously presented) Seed from the transgenic plant of claim 17.
20. (Currently amended) A transgenic plant comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim [[3]] 2.
21. (Previously presented) Seed from the transgenic plant of claim 20.
22. (Currently amended) A transgenic plant comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid of claim 4.
23. (Previously presented) Seed from the transgenic plant of claim 22.
24. (Currently amended) A method for altering a plant's response to vernalization, the method comprising: transforming a plant or plant tissue with a

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genetic construct comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid [as in] of claim [[3]] 1 and inducing the expression of the genetic construct in said plant to alter said plant's response to vernalization.

25. (Currently amended) A method for altering a plant's response to vernalization, the method comprising: transforming a plant or plant tissue with a genetic construct comprising the recombinant ZCCT1 protein coding sequence isolated nucleic acid [as in] of claim [[4]] 2 and expressing the genetic construct in said plant to alter said plant's response to vernalization.

26. (Currently amended) The method of claim 24, wherein the plant is selected from the group consisting of wheat, barley, rye, oats, and forage grasses.

27. (Currently amended) The method of claim 25, wherein the plant is selected from the group consisting of wheat, barley, rye, oats, and forage grasses.

28. (Withdrawn) A transgenic plant comprising a genetic construct that inhibits ZCCT1 repression of AP1.

29. (Withdrawn) The transgenic plant of claim 28 wherein the genetic construct is an RNAi construct that inhibits ZCCT1 activity.

30. (Withdrawn) The transgenic plant of claim 28 wherein the genetic construct comprises an antisense construct that inhibits ZCCT1 activity.

31. (Withdrawn) The transgenic plant of claim 28 wherein the genetic construct comprises a nucleic acid sequence encoding a repression defective ZCCT1 protein operably linked to a promoter.

32. (Withdrawn) The transgenic plant of claim 28 wherein the genetic construct comprises a nucleic acid sequence encoding a DNA binding defective ZCCT1 protein operably linked to a promoter.

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33. (Withdrawn) A molecular marker for Vrn2 derived from SEQ ID NO:75.

34. (New) The isolated nucleic acid of claim 1 wherein said nucleic acid encodes a polypeptide having at least 92% identity to the polypeptide encoded by SEQ ID NO: 75.

35. (New) The isolated nucleic acid of claim 1 wherein said nucleic acid encodes a polypeptide having at least 95% identity to the polypeptide encoded by SEQ ID NO: 75.

36. (New) The isolated nucleic acid of claim 1 wherein said nucleic acid encodes the polypeptide encoded by SEQ ID NO: 75.

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